

CHAPTER: 5

PHYSICAL AND CHEMICAL CHANGESI Short ANSWER TYPE QUESTIONS:

1. LPG is stored in a cylinder as a liquid. When you burn it in the stove, it is in the gaseous form. What kind of changes occur during the use of LPG?

Ans:

When LPG comes out from the cylinder it becomes a gas from its liquid state. It is a physical change because it can be liquefied again by compressing and cooling the gas. When the gas burns in the stove it produces heat and light. So it is a chemical change.

2. Iron rusts; whereas stainless steel which contains large quantity of iron does not. Explain.

Ans:

Stainless steel is made by alloying iron with nickel and chromium. Alloying makes it corrosion resistant. Hence it does not rust.

II LONG ANSWER TYPE QUESTIONS:

3. What is crystallisation? What type of change is it and why?

Ans:

Crystallisation: The method used for obtaining a substance in pure solid geometrically shaped crystals is called crystallisation.

It is a physical change because in it, no new substance is formed.

4. What happens when Baking soda reacts with Vinegar? What kind of change is it and why?

Ans: When Baking soda is added to Vinegar, a stream of bubbles of a colourless gas comes out. The evolved gas is Carbon dioxide. It turns limewater milky.

It is a chemical change.

Vinegar + Baking soda \rightarrow Sodium acetate + Carbon dioxide + water.

Carbon dioxide + Limewater \rightarrow Calcium carbonate + water
(It turns limewater milky)

III HIGHER ORDER THINKING SKILLS:

5. Which property of iron is modified in stainless steel? What is done to do so?

Ans: Iron when exposed to moist air gets covered with a layer of brown powdery material called rust.

To make iron corrosion resistant it is alloyed with carbon, nickel and chromium and the product thus obtained is stainless steel. It is corrosion-free and can be used in place of iron.

6. Rusting of iron requires air and water (moisture). Does the quality of air and water affect the rusting process?

Ans: Yes, the quality of air and water affects rusting of iron. Air with high moisture content or with oxides of sulphur, nitrogen and carbon promotes rusting of iron. Also, the salty water increases the rate of rusting on iron.

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